

ABSTRACT

The present invention provides a microcomputer that makes it possible to implement a real-time trace on a mass-produced chip using few terminals, acquire trace information from within a specified range, and measure execution times, together with electronic equipment and a debugging system comprising this microcomputer.

A trace information output section (16) outputs trace information for implementing a real-time trace, to four dedicated terminals. It outputs instruction execution status information (DST[2:0]) of the CPU to three terminals and the PC value (DPCO) of a branch destination when an PC absolute branch has occurred, serially to one terminal. A microcomputer (10) outputs information indicating the start and end of a trace range or execution-time measurement range to DST[2] in a predetermined sequence. A debugging tool (20) determines the start and end of the trace range or execution-time measurement range from the values in DST[2].